1886MNRAS..46R.393H

Observations of the Companion of Sirius made at the Dearborn Observatory, Chicago, U.S.A. By Prof. G. W. Hough, Director.

(*Communicated by the Secretaries.*)

	Date.	P.	S.
	1886·066	28°·7	7″·31
	·096	29·5	7·25
	·099	28·8	7·10
	·125	29·1	7·14
	·128	28·7	7·21
	·145	28·9	7·11
	·164	28·8	7·23
	·167	28·1	7·20
	·170	28·2	7·22
	·175	28·3	7·17
	·186	29·0	7·25
	·203	28·5	7·31
Mean Results	1886·144	28·7	7·21 (12 obs.)

Note on a remarkable Sun-spot. By B. J. Hopkins.

While examining the Sun's surface on April 24 at $20^{h}\ 55^{m}$, I had the good fortune to observe the somewhat rare phenomenon of a coloured sun-spot. At the time there were in all five spots on the solar disc, arranged in two groups; the largest spot being the one presenting the abnormal appearance, which in size was equal to all the others put together, and comprised within its single penumbra four distinct umbræ.

Coloured spots have been occasionally seen by different observers, but this spot differed from those hitherto observed, in that it was only two out of its four umbræ which presented an appearance different to what is usually seen. Observed with a three-inch refractor and an Huyghenian eye-piece magnifying fifty diameters, the spot referred to presented the extraordinary spectacle of being of two colours, its two southern umbræ being of the ordinary blackish hue, while the two northern umbræ were of a reddish-brown. So marked, indeed, was the colour, that never having seen such a phenomenon before—though I have observed several scores of spots in the course of the last ten years—I was at first inclined to attribute the unusual appearance to some defect in the instrument, or to some temporary imperfection of my sight. I therefore changed the eye-piece I was using for another negative of double the power, with the result that the only difference observable besides the in-

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creased magnification was that one of the umbræ was more decidedly coloured than its companion.

Still the appearance was to me so unusual that I remained half inclined to doubt the evidence of my senses, and regard it as merely an optical illusion. To decide the question I called my wife, who upon looking through the telescope immediately remarked the colour of the spot, comparing it to that of rusty iron.

How long before I began observing, the spot had presented this abnormal appearance I am unfortunately unable to say; but by 21^h 15^m, or twenty minutes after I first looked at the Sun, all trace of the unusual colour had vanished. I may say in conclusion that the penumbra of the spot presented nothing unusual in its appearance; it was only the umbra that was coloured.

Forest Gate, E.

Jupiter's Third Satellite in Transit, April 11, 1886.

By W. F. Denning.

The satellite crossed the planet as a dusky spot, except when near the limbs, where it was visible as a bright spot. The following notes were made during the progress of the phenomenon. The times are only approximate:—

9^h 33^m Sat. III. increasing in faintness and drawing very close to the N.E. limb. It seems slightly overshadowed, especially on the side nearest *Jupiter*, where the shading reminds one of the penumbra falling on the Moon prior to a lunar eclipse.

9 49. III. in contact with exterior edge of disc, the satellite is much brighter than the planet's limb, though itself involved in a delicate veil of shade.

9 58. Ingress complete. Satellite growing perceptibly fainter though still far brighter than the limb, on which it is projected as a bold, pearl-like spot just within the periphery.

10 7. III. now quite invisible. It rapidly lost brightness until its tone became indistinguishable from that of the surface. The satellite is evidently in course of transition from a bright to a dark spot. The seeing not very good.

10 48. Light cirrous clouds partly hindered close observation until this time, then III. was immediately seen as a pale dusky spot, rather small, and traversing a bright zone separating two dark belts in the planet's north temperate zone, and lying midway between the N. equatorial belt and N. limb. The S. side of the satellite is evidently darker than the opposite side.

10 55. The satellite assuming a deeper tone. The air has now become steadier; definition very sharp.

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